

Basic Actuator

The Air-Con series pneumatic actuators are 90 degree rotating actuators, suitable for quarter-turn valves. Spring return and double acting units are available.

Double Acting Models

The air is introduced to port “A” (left port) forcing the pistons apart and towards the end positions, resulting in a counter-clockwise rotation of valve stem. When valve opens, exhaust air will exit at port “B” (right port). Air supplied to port “B” forces pistons toward the center resulting in a clock-wise rotation of valve stem and causing the valve to close. The exhaust air will exit at port “A”.

Spring Return Models

The air is introduced to port “A” (left port) forcing pistons apart and towards end position, compressing springs and resulting in a counter-clockwise rotation of valve stem, which will open or close valve as required. Exhaust air will exit at port “B” (right port) when air supply to center chamber of actuator is depressurized due to air or electrical failure. The compressed springs will force piston towards the center position and will rotate valve stem clockwise 90 degrees, which will open or close valve as required.

All “Air-Con” actuators have pre-drilled and tapped standard namur connections for direct mounting of integral solenoids and for brackets mounting valves and controls.

Maximum supply pressure is 150 PSIG. Pressure regulators may be used to control pressure over 150 PSIG down to optimum range.

Actuator Disassembly

- A. Important: Prior to removing actuator from valve, all operating pressure from actuator should be removed and all electric service lines to actuator are to be disconnected!
- B. Remove the actuator from mounting bracket or mounting pads.
- C. Remove end caps after removing end bolts.
- D. Rotate the drive-shaft (pinion) until pistons travel outward and are flush with body end. To ease reassembly position, mark drive shaft until pistons become disengaged. Remove pistons from body.
- E. If your unit comes equipped with limit switch cam (optional), remove hex bolt and washer, holding cam in place.
- F. Remove spring clip and thrust washer and push drive shaft down through body.
- G. Remove and discard old seals (o-ring) and bearing and replace with new components from actuator designated repair kits.
- H. Examine the inside walls of body housing for any wear or scoring. Barely visible scoring or wear is acceptable.
- I. Re-assembly to be done in reverse order of disassembly.
- J. Prior to re-assembly, all seals and internal components should be lightly coated with a PTFE filled lubricant.
- K. Set inward piston travel stops before replacing end caps.
- L. Should adjustments of inward piston be required after assembly, adjustment should be made per internal travel stroke adjustment.

Technical Data

1. Operating media: Dry or lubricated air; NO GAS OR HYDRAULIC FLUID ALLOWED.
2. Air supply: Double acting from 40 to 150 PSIG. Spring return from 50-150 PSIG.
3. Temperature: from -4 F to 175 F
4. Lubrication: Factory lubricated for the life of the actuator under normal working conditions.
5. Construction: Suitable for indoor or outdoor installations.
6. External travel stop: + or - 4 degrees adjustment on 90-degree stroke.
7. Internal travel stop: + or - 4 degrees adjustment on 90-degree stroke.
8. Rotation: Pressurized port “A” (left port) produces counter-clockwise rotation. Pressurized port “B”, or spring return, produces clockwise rotation.
9. Angle rotation: 90 degrees with + or - 4 degrees over-travel or less travel each end.